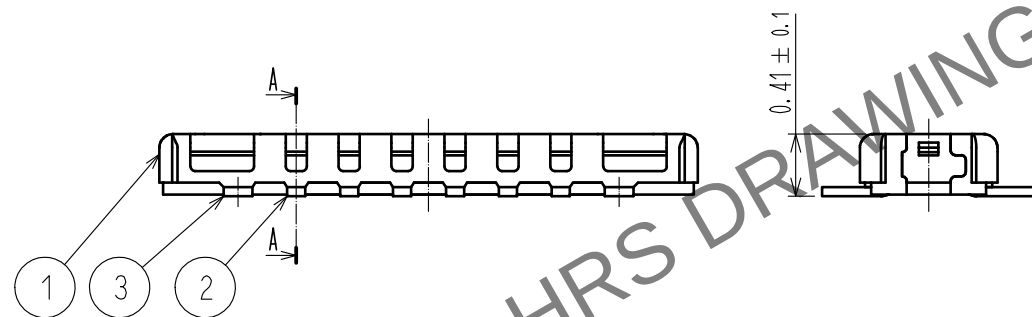
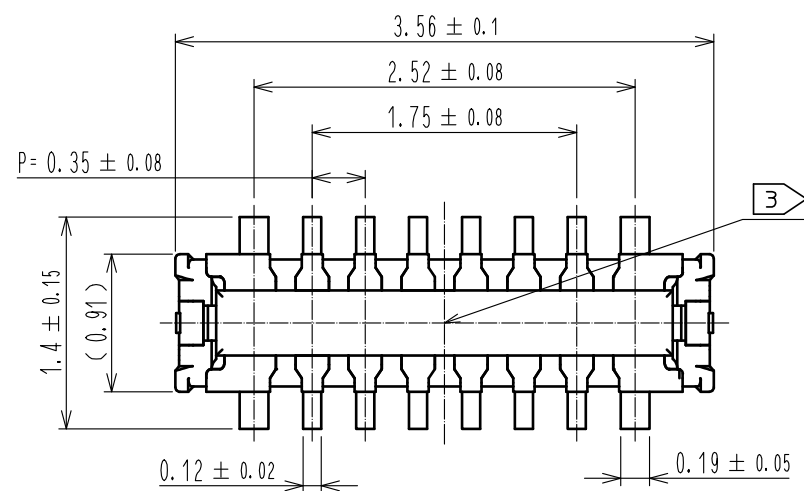
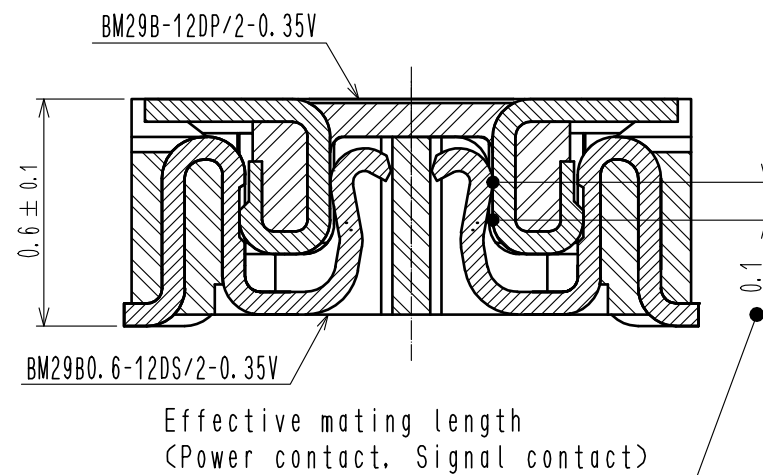
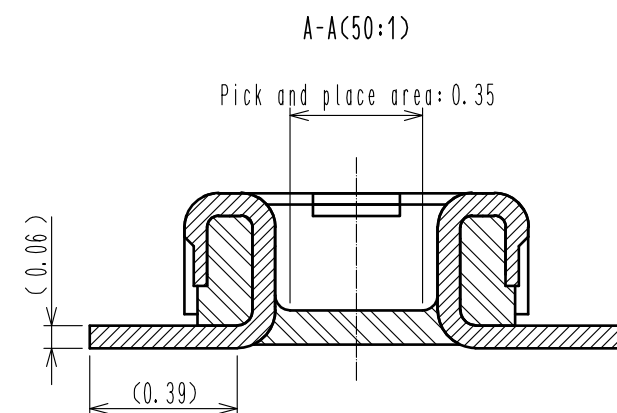
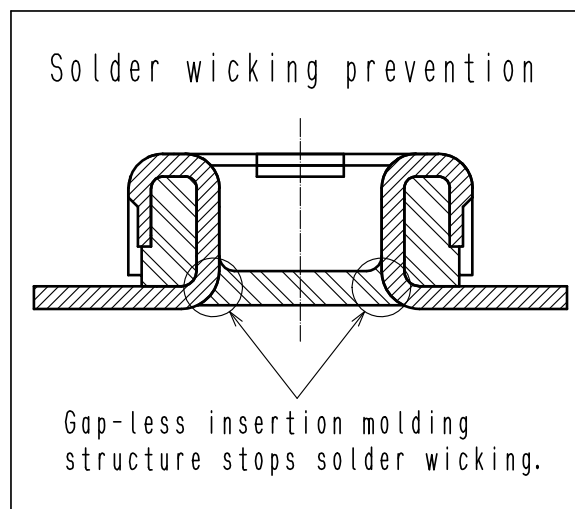


Dec.1.2025 Copyright 2025 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

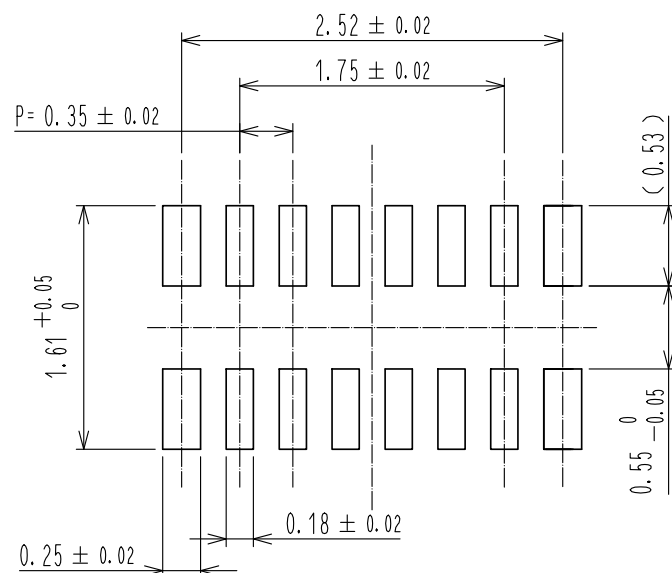


- NOTE 1 . All lead co-planarity will be 0.08mm MAX.
- 2 . Contact plating specifications
Contact area : Gold 0.05 μm MIN
SMT lead : Gold 0.05 μm MIN
Under plating : Nickel 1 μm MIN
(Surface : Sealing)
- 3 . Cavity number is indicated at approximate location.



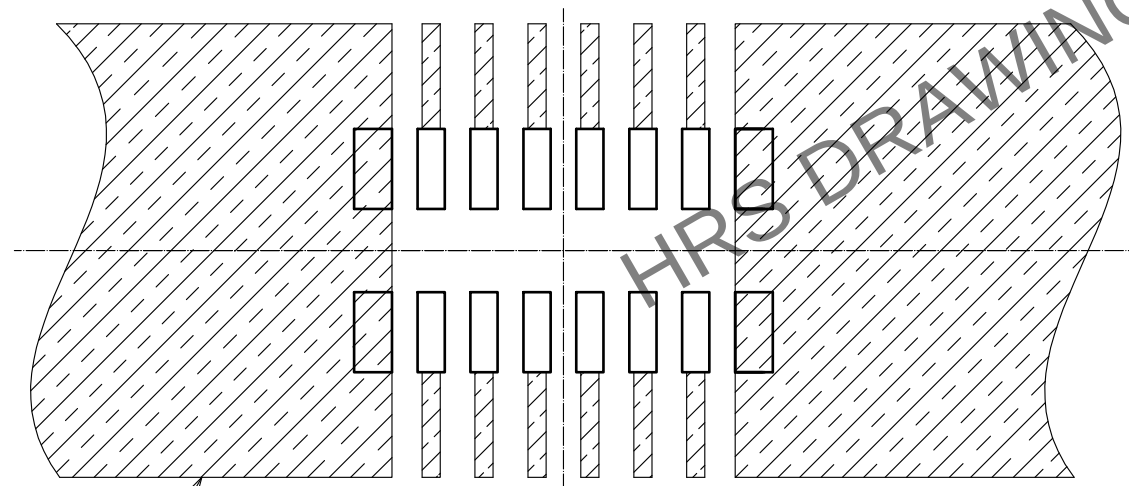
3	PHOSPHOR BRONZE	2	7	PS	CLEAR, REINFORCEMENT COLLAR
2	PHOSPHOR BRONZE	2	6	PS	BLACK, PLASTIC REEL
1	LCP	BLACK	5	POLYESTER	CLEAR, COVER TAPE
NO.	MATERIAL	FINISH . REMARKS	NO.	MATERIAL	FINISH . REMARKS
UNITS mm		SCALE 20 : 1	COUNT	DESCRIPTION OF REVISIONS	DESIGNED
APPROVED : TY. 001	20230818	DRAWING NO.	EDC-394481-53-00	CHECKED	DATE
CHECKED : RT. SHIMIZU	20230817	PART NO.	BM29B-12DP/2-0.35V(53)	CODE NO.	
DESIGNED : RT. OSAKI	20230817				
DRAWN : RT. OSAKI	20230817				

◆Recommended PCB layout

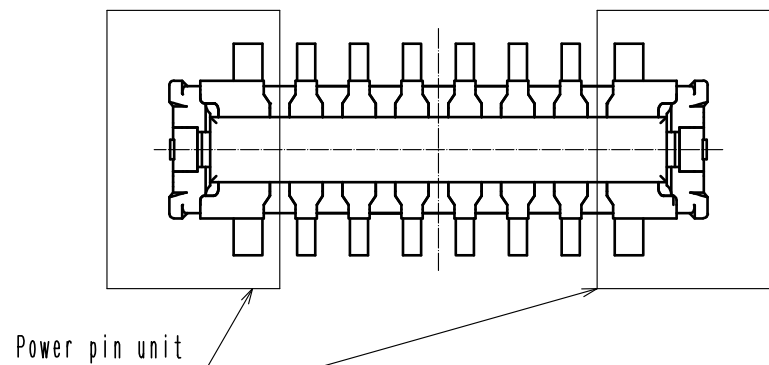


◆Recommended metal mask dimensions
Metal mask thickness : $80 \mu\text{m}$
(Open ratio : 80% for PCB layout)

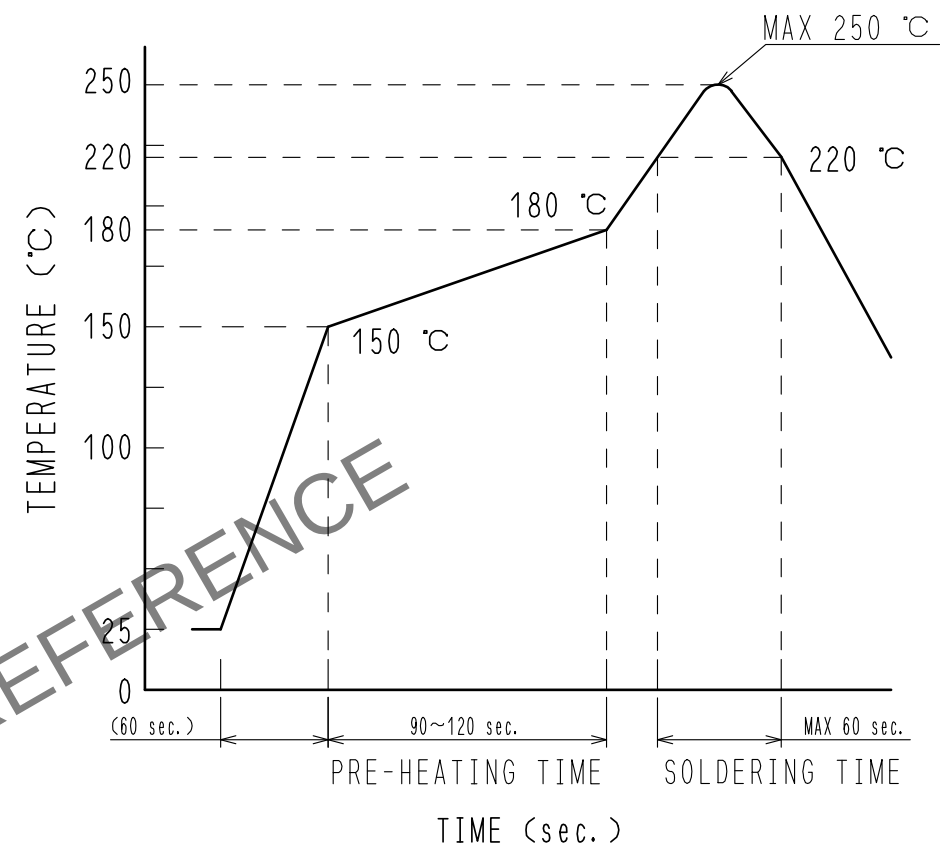
◆Recommended electrical circuit layout



Electrical circuit



4 Recommended reflow temperature profile using lead-free solder paste.



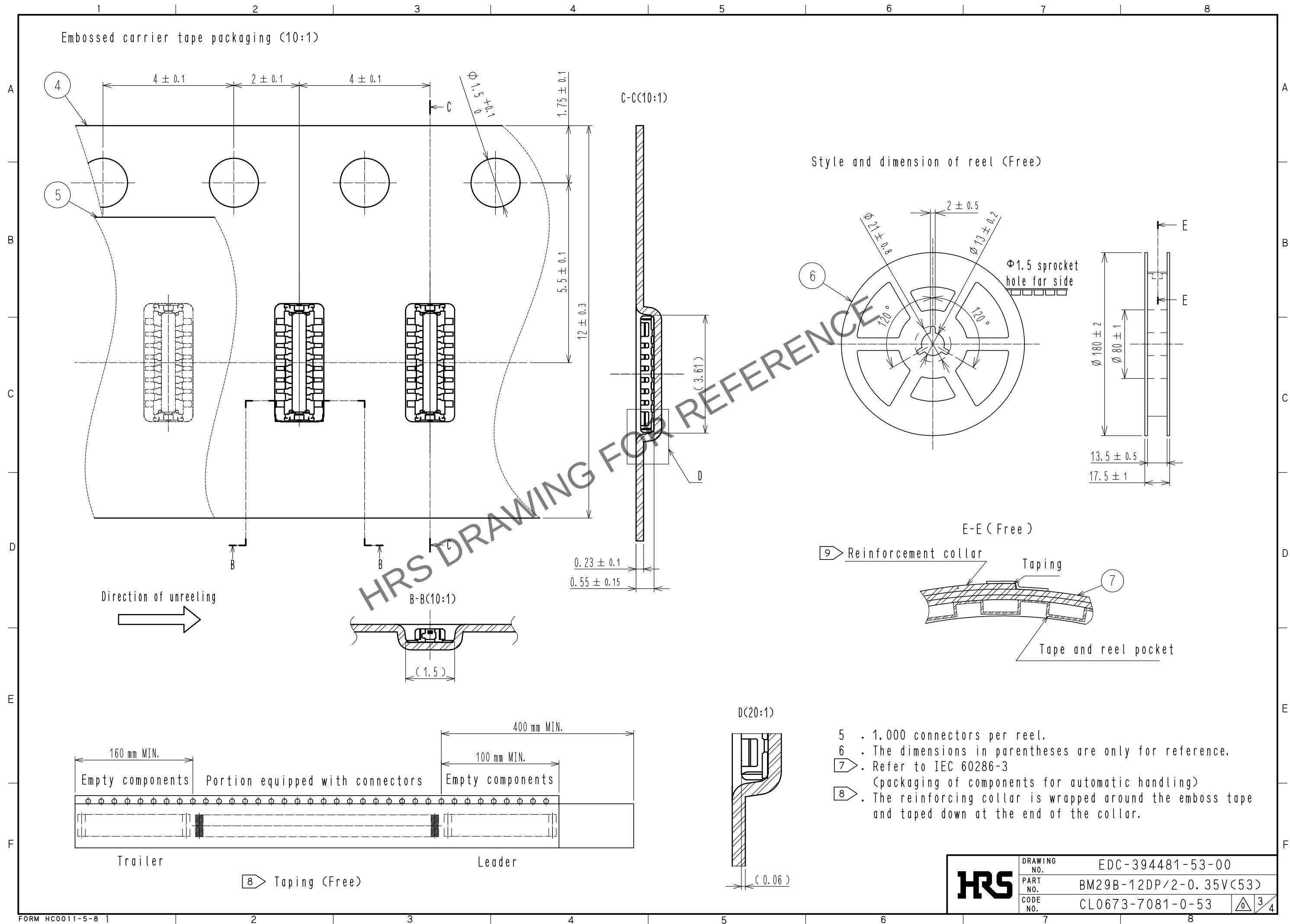
Reflow method: IR reflow
Number of reflow cycles: 2 cycles MAX.
1) Reflow time
Duration above 220°C: 60 sec MAX.
(Peak temperature: 250°C MAX)
2) Pre-heat time
Pre-heat temperature (MIN): 150°C
Pre-heat temperature (MAX): 180°C
Pre-heat time: 90-120 sec.

4 This temperature profile is based on the suggested metal mask and footprint. Please contact us if using different settings from our recommendation.

HRS

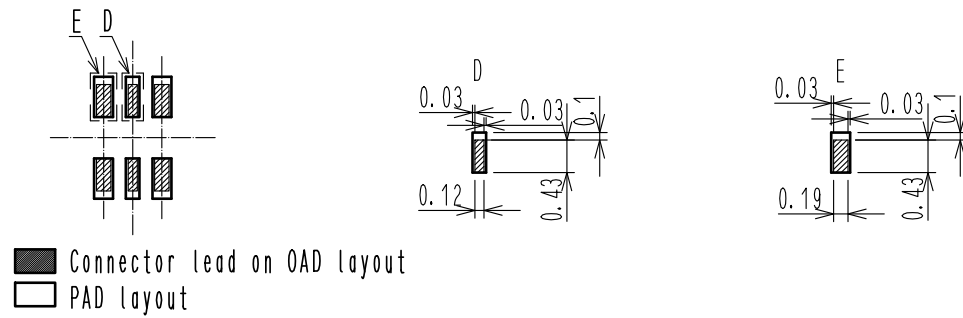
DRAWING NO.	EDC-394481-53-00
PART NO.	BM29B-12DP/2-0.35V(53)
CODE NO.	CL0673-7081-0-53

2/4



9. Please refer to the product guideline ETAD-H1016 for detail of connector handling.

The position between the connector and PAD

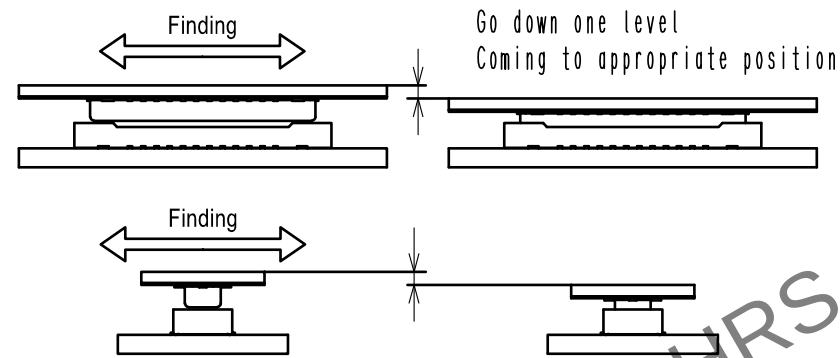


Mating method

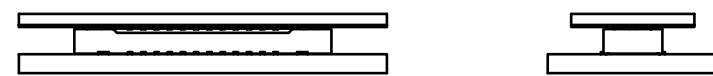
Please mate the connector by hand.

Mating procedure

- (1) Find the alignment area to the connector in the appropriate mating position.
This connector has an alignment chamber (guidance ribs) on receptacle side and "r" on plug side, so that the connector will be self-aligned.
When the connector comes to the appropriate position. The connector goes into the aligned position.
When aligned, it can be felt by hand.



- (2) When guiding, the connectors are aligned parallel to each other, with longitudinal and lateral movements restricted. Mate them properly by applying force in this condition.

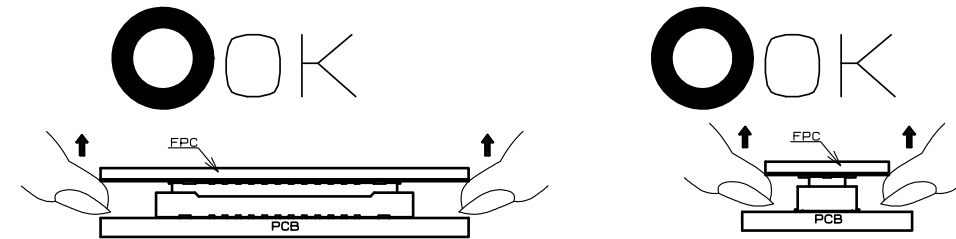


- (3) Make sure the connectors are mated correctly. If one side is floating or the connectors are mated in one direction, un-mate them once, and then mate them again, following the procedures above from the beginning.

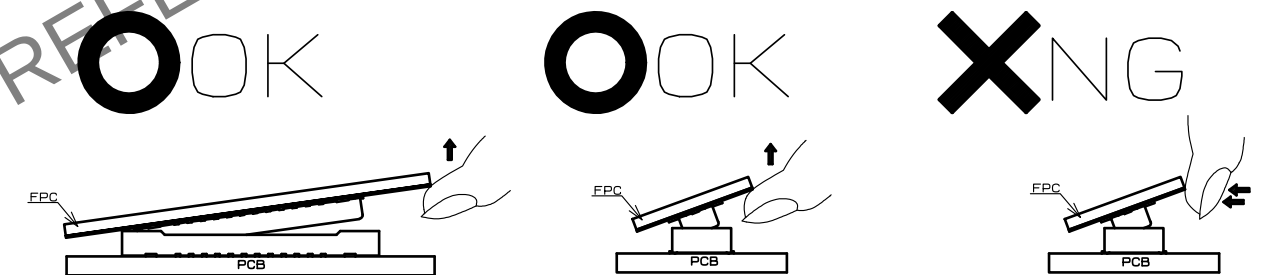
Un-mating method

Please un-mate the connector by hand

- (1) Un-mate the connectors parallel to each other. However, if the connectors have high pin counts or thinner FPC and stiffener, it becomes more difficult to do so.



- (2) If the connector cannot be un-mated parallel it can be removed diagonally from the pitch direction. Be careful to do so since this action applies stress on the contact.



- (3) If the FPC is not rigid. The connector can be broken. Please check the action of the FPC to be used repeatedly at the time of trial production. be careful to un-mate them from the pitch direction, pulling it from the corner can also risk to putting stress on contacts.

